



Descriptions of 30 Sites Proposed to the National Priorities List in February 1992

Office of Emergency and Remedial Response
Hazardous Site Evaluation Division (OS-230)

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This document consists of descriptions of the 30 sites proposed for the National Priorities List (NPL) in early February 1992. The size of the site is generally indicated, based on information available at the time the site was scored using the Hazard Ranking System (HRS). The size may change as additional information is gathered on the sources and extent of contamination. Sites are arranged alphabetically by State (two-letter abbreviations) and by site name within the State.

CLEANING UP UNDER SUPERFUND

The Superfund program is managed by the U.S. Environmental Protection Agency (EPA). It is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), enacted on December 11, 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA), enacted on October 17, 1986. In October 1990, SARA was extended to September 30, 1994. The Hazardous Substance Response Trust Fund set up by CERCLA as amended pays the costs not assumed by responsible parties for cleaning up hazardous waste sites or emergencies that threaten public health, welfare, or the environment; Superfund also pays for overseeing responsible parties conducting cleanup.

Two types of responses may be taken when a hazardous substance is released (or threatens to be released) into the environment:

- **Removal actions** – emergency-type responses to imminent threats. SARA limits these actions to 1 year and/or \$2 million, with a waiver possible if the actions are consistent with remedial

responses. Removal actions can be undertaken by the private parties responsible for the releases or by the Federal government using the Superfund.

- **Remedial responses** – actions intended to provide permanent solutions at uncontrolled hazardous waste sites. Remedial responses are generally longer-term and more expensive than removals. A Superfund-financed remedial response can be taken only if a site is on the NPL. EPA published the first NPL in September 1983. The list must be updated at least annually.

EPA's goals for the Superfund program are to:

- Ensure that polluters pay to clean up the problems they created
- Work first on the worst problems at the worst sites, by making sites safe, making sites clean, and bringing new technology to bear on the problem

REMEDIAL RESPONSES

The money for conducting a remedial response at a hazardous waste site (and a removal action, as well) can come from several sources:

- The individuals or companies responsible for the problems can clean up voluntarily with EPA or State supervision, or they can be forced to clean up by Federal or State legal action.
- A State or local government can choose to assume the responsibility to clean up without Federal dollars.
- Superfund can pay for the cleanup, then seek to recover the costs from the responsible party or parties.

A remedial response, as defined by the National Contingency Plan (the Federal regulation by which Superfund is implemented), is an orderly process that generally involves the following steps:

- Take any measures needed to stabilize conditions, which might involve, for example, fencing the site or removing above-ground drums or bulk tanks.
- Undertake initial planning activities to scope out a strategy for collecting information and analyzing alternative cleanup approaches.
- Conduct a remedial investigation to characterize the type and extent of contamination at the site and to assess the risks posed by that contamination.
- Conduct a feasibility study to analyze various cleanup alternatives. The feasibility study is often conducted concurrently with the remedial investigation as one project. Typically, the two together take from 18 to 24 months to complete and cost approximately \$1.3 million.
- Select the cleanup alternative that:
 - Protects human health and the environment
 - Complies with Federal and State requirements that are applicable or relevant and appropriate

- Uses permanent solutions and alternative treatment technologies or resource recovery technology to the maximum extent practicable

- Considers views of State and public

- Is "cost effective" -- that is, affords results proportional to the costs of the remedy

- Design the remedy. Typically, the design phase takes 6 to 12 months to complete and costs approximately \$1.5 million.
- Implement the remedy, which might involve, for example, constructing facilities to treat ground water or removing contaminants to a safe disposal area away from the site.

EPA expects the implementation (remedial action) phase to average out at about \$25 million (plus any costs to operate and maintain the action) per site, and some remedial actions may take several years complete.

The State government can participate in a remedial response under Superfund in one of two ways:

- The State can take the lead role under a cooperative agreement, which is much like a grant in that Federal dollars are transferred to the State. The State then develops a workplan, schedule, and budget, contracts for any services it needs, and is responsible for making sure that all the conditions in the cooperative agreement are met. In contrast to a grant, EPA continues to be substantially involved and monitors the State's progress throughout the project.
- EPA can take the lead under a Superfund State Contract, with the State's role outlined. EPA, generally using contractor support, manages work early in the planning process. In the later design and implementation phases, contractors do the work under the supervision of the U.S. Army Corps of Engineers. Under both arrangements, the State must share in the cost of the implementation phase of cleanup.

CERCLA requires that EPA select the remedy.



UNITED STATES
ENVIRONMENTAL PROTECTION
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NATIONAL PRIORITIES LIST NPL

OERR Hazardous Site Evaluation Division Washington, DC 20460

**POPILE, INC.
El Dorado, Arkansas**

The Popile, Inc., site is on the east side of Southfield Road, approximately ¼ mile south of where it intersects U.S. Highway 82 just south of El Dorado, Union County, Arkansas. The property is bordered by the CRI&P Railroad on the east and Bayou de Loutre, a perennial creek, on the north. Located upgradient and south of the site is a woodland area.

In 1947, El Dorado Creosote Co., the parent company of Popile, Inc., began treating wood at the 40-acre property using pentachlorophenol (PCP) and creosote. El Dorado Pole & Piling Co., Inc., purchased the property in 1958. Starting in 1976, three surface impoundments were used as part of the waste water treatment process. Wood-treatment operations stopped in July 1982. In September 1982, Popile bought approximately 7.5 acres of the property, including the surface impoundments and a large open area known as the salt flat. In October 1984, Popile closed the three impoundments as one unit.

From September 1990 to May 1991, EPA used CERCLA emergency funds to deal with the leaking closed impoundment and the release of contaminants from the wood-treatment facility, a nearby impoundment that collects surface water drainage from the treatment area, and a large open area known as the Salt Flat. EPA removed waste material from the four areas and buried it just south of the impoundment.

EPA analyses conducted in October 1989 detected PCP, acenaphthene, naphthalene, benz(a)anthracene, benzo(a)pyrene, fluorene, pyrene, and other chemicals associated with wood treatment in on-site soil. Shallow on-site monitoring wells may be similarly contaminated.

Sediments collected off-site, where site drainage enters Bayou de Loutre, contained the same contaminants found on-site. The bayou is fished extensively, and a drainage boat ramp is downstream from the site. Wetlands begin 1 mile downstream and extend for more than 14 stream miles.

Shallow ground water (0 to 200 feet below the surface) is used primarily for commercial livestock watering. The City of El Dorado obtains its drinking water from wells drawing from the El Dorado Aquifer (700 to 1,000 feet below the surface). An estimated 26,300 people obtain drinking water from public and private wells into this aquifer within 4 miles of the site. The nearest well is a private well 0.75 mile from the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



WEST MEMPHIS LANDFILL West Memphis, Arkansas

West Memphis Landfill covers 30 acres in a mixed industrial/agricultural/residential area of West Memphis, Crittenden County, Arkansas. The site, privately owned and operated, was an uncontrolled dump from the mid-1950s until it closed in 1979. The site is not secured, permitting illicit dumping to continue. South 8th Street runs through the site and is the only access to the Mississippi River for the City of West Memphis. The site is in a fresh water wetland on the banks of the river. William L. Johnson Co. currently owns the land.

Seven waste pits and two waste ponds are located on the site. The pits reportedly received wastes such as oil and grease sludge, sewage sludge, construction debris, chemical paint waste, and general household wastes. No records were kept of the amount or type of waste disposed on-site. In 1981, 89 drums containing methyl ethyl ketone and toluene, some leaking, were removed from the banks of the Mississippi River.

EPA sampling of six of these pits in February 1988 identified benzene, toluene, xylene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dieldrin, DDE, DDD, PCBs, and lead. The largest pit is the most heavily contaminated. Heavy metals, including lead, copper, and zinc, are present in the waste ponds.

The site lies within the 1-year floodplain of the Mississippi River. During 1950-91, floods occurred in 26 years. Hazardous substances on the surface of one or more sources at the site have come in direct contact with the waters of the Mississippi River during floods in 1983, 1984, 1985, 1990, and 1991, according to EPA. A nesting site of a Federally endangered species, the interior least tern, has been documented on Ensley Bar approximately 4 miles downstream from the facility. The river is used for commercial fishing.

In 1988, EPA detected benzene, ethyl benzene, toluene, and xylenes in ambient air on-site. An estimated 30,400 people live within 4 miles of the site.

Five City of West Memphis wells within 4 miles of the site provide drinking water to an estimated 28,000 people. The wells draw from the Wilcox Aquifer approximately 1,300 feet below the surface. Ground water is also used in preparing soft drinks, and a Wellhead Protection Area designated under the Safe Drinking Water Act is within 4 miles of the site.

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CONCORD NAVAL WEAPONS STATION Concord, California

Concord Naval Weapons Station is located in the north-central portion of Contra Costa County, California. Approximately 30 miles northeast of San Francisco, it is bordered to the north by Suisun Bay and to the south and west by the City of Concord. The facility encompasses over 12,800 acres of inland and tidal areas, plus a radiography facility in Pittsburg, California. The Concord Station serves as the major ammunition transshipment port on the west coast for the Department of the Navy. On-site activities also include administrative and support work. Transshipment operations are centered on the wetlands bordering Suisun Bay (commonly called the Tidal Area). Wastes generated on-site from base operations have been disposed of in the Tidal Area since base operations began in 1942.

The Navy's substantial investigations of the station have identified 32 areas potentially containing hazardous substances. The investigations are focusing primarily on six areas in the 7,630-acre Tidal Area.

The *Tidal Area Landfill*, *R-Area Disposal Site*, and the *Wood Hogger Site* are wetlands in the western tidal area contaminated from on-base waste disposal practices. An estimated 3,000 tons of mixed waste have been deposited in the Tidal Area Landfill since the 1940s. Material and waste generated during the segregation of conventional munitions were discarded in the R-Area Disposal Site. At the Wood Hogger Site, wood contaminated with pentachlorophenol (PCP) was chipped and placed in an adjacent wetland. Analytical investigations identified hazardous substances, including zinc, copper, lead, cadmium, arsenic, naphthalene, and methylene chloride, in soil, sediment, or surface water.

Allied Sites A and B, the *Kiln Site*, and the *K-2 Area* are wetlands in the eastern tidal area. They were contaminated from private industrial activities, and were subsequently purchased by the Navy to create a "buffer zone" for base operations. Soil sampling in these areas in 1986 detected zinc, copper, lead, cadmium, and arsenic. High tides inundated the sources, carrying contaminants to Suisun Bay. Elevated levels of copper, zinc, lead, and arsenic were detected in surface and composite soil in the K-2 Area.

The contaminated areas are critical habitats for the salt marsh harvest mouse, a Federally endangered species. The black clapper rail, also a Federally endangered species, inhabits adjacent wetlands. Suisun Bay supports extensive commercial and recreational fishing. Other potential areas of concern at the station include the Froid and Taylor Road Disposal Area, the Black Pit at Red Rock Site, and the G-1 Site.

This site was proposed to the NPL on June 24, 1988 (53 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comments, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on August 30, 1990 (55 FR 35502). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water pathway, which is scored differently under the two systems.

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**COOPER DRUM CO.
South Gate, California**

Cooper Drum Co. recycles drums on 3.8 acres at 9316 South Atlantic Avenue in South Gate, Los Angeles County, California. Since 1941, Cooper has reconditioned closed-topped, steel drums that previously held a variety of industrial chemicals. The facility is bounded by industrial properties to the north and east, mixed commercial/residential properties to the west, and a former elementary school (Tweedy Elementary School) to the south. On the Cooper property are storage areas for used and reconditioned drums and a drum processing area, plus office, maintenance, and warehouse buildings. Most of the site is paved.

In April 1987, the Los Angeles County Health Department (LACHD) Emergency Response Team responded to an incident at the Tweedy School property. An unknown quantity of highly caustic liquid waste had migrated via underground seepage from the Cooper property. The source of the waste was the caustic wash water from the drum recycling process line located in the building directly north of the school property. Initially, the waste was determined to be comprised mainly of sodium hydroxide and oil. The top layer of soil was excavated. Since contamination had migrated to a portion of the school property, it was paved over. Due to health concerns related to several sites in the area, Tweedy School has since been closed, and no further remedial action is planned at this time.

In June 1987, analysis of on-site soil samples by consultants for Cooper detected volatile organic compounds (VOCs) to depths of 30 feet. In 1990, the consultants drilled three monitoring wells to characterize the extent of contamination in shallow ground water beneath the site. Analysis of samples from the wells documented VOCs, including tetrachloroethene, trichloroethene, vinyl chloride, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, and benzene.

In 1987, South Gate closed four of its municipal wells due to tetrachloroethene contamination. These four wells lie between 500 and 1,500 feet downgradient of Cooper and draw water from the Silverado Aquifer, which occurs at 600 feet bgs. Contamination of these wells cannot be attributed solely to Cooper at this time because there are other potential sources of VOCs in the vicinity. However, evidence suggests the shallow aquifer and the lower Silverado Aquifer are hydraulically connected, so that water can move between them.

Municipal wells within 4 miles of the site supply drinking water for approximately 335,000 people. The nearest well is 0.2 mile from the site. The majority of the wells draw from the Silverado Aquifer.

Tanks and sludge pits in the drum processing area are open to the air, creating a potential for gases and particles to be released to the air. An estimated 340,000 people live within 4 miles of the site, and 50 people work on the site. A sensitive environment is within 3 miles.

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**GBF, INC., DUMP
Antioch, California**

The GBF, Inc., Dump covers approximately 88 acres at the corner of Somersville Road and James Donlon Boulevard in Antioch, Contra Costa County, California. The site is bounded on the north and east by residential developments, to the south by open space and a former sanitary landfill (Lynch landfill) that accepted municipal wastes, and to the east by open space and a former petroleum tank farm.

Between the early 1960s and 1975, Industrial Tank Corp. leased the eastern 64 acres of the site and operated up to 10 surface impoundments covering approximately 11 acres. The unlined impoundments were interconnected by a series of cascading conduits, allowing liquid wastes to flow freely. The company accepted sludges, acids, oils, and slurries containing such hazardous substances as hexavalent chromium, lead, cyanide, asbestos, acetone, trichloroethylene, benzene, tetrachloroethylene, formaldehyde, phenol, DDT, and diazinon.

In 1974, the California Regional Water Quality Control Board (CRWQCB) issued a Cleanup and Abatement Order which closed the surface impoundments and prohibited hazardous waste disposal at the site after October 1, 1974. Since then, the site has accepted only non-hazardous waste.

Monitoring wells on and north of the site are contaminated with cadmium, nickel, cyanide, and numerous volatile organic compounds (VOCs), according to a 1990 report of a consultant to the California Department of Toxic Substances Control (CDTSC).

An intermittent creek, Markley Creek, runs north along the western property boundary, and a drinking water canal, the Contra Costa Canal, runs west along the northern property boundary. Markley Creek runs between the cities of Antioch and Pittsburg and eventually empties into a marsh adjacent to the San Joaquin River. High lead levels (65 milligrams per kilogram) were detected in the sediments of Markley Creek adjacent to the site. The Contra Costa Canal is the primary source of drinking water for cities in the area of the site. Intakes within 15 miles downstream of the site provide drinking water to approximately 327,500 people. Residents outside the limits of the municipal canal water system generally drink bottled water.

CDTSC, with input from CRWQCB, is overseeing field work for the remedial investigation/feasibility study (RI/FS) to determine the type and extent of contamination at the site and identify alternatives for remedial action. The RI/FS is underway.

This site was proposed to the NPL on June 24, 1988 (53 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comments, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on October 4, 1989 (54 FR 41015). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water pathway, which is scored differently under the two systems.

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JET PROPULSION LABORATORY (NASA) Pasadena, California

The Jet Propulsion Laboratory (JPL) covers 176 acres at 4800 Oak Grove Drive in Pasadena, Los Angeles County, California. The area is primarily residential with some light commercial operations. It is bordered on the east by the Arroyo Seco Dry Wash, on the west by a residential neighborhood, on the north by the San Gabriel Mountains, and on the south by an equestrian club and a Los Angeles County Fire Station. Approximately 120,840 people live within 4 miles of the site.

The Army developed and operated JPL between 1945 and 1957; jurisdiction was transferred to the National Aeronautics and Space Administration (NASA) in 1958. The California Institute of Technology is under contract to NASA to conduct research and development at JPL in aeronautics, space technology, and space transportation. JPL's primary activities include exploration of the earth and solar system with automated spacecraft, and the design and operation of the Global Deep Space Tracking Network.

Among the sources of hazardous substances at the site are numerous seepage pits, where liquid and solid waste were reportedly disposed of; a "settling" chamber in the JPL storm drain system; contaminated soil excavated from part of the system; and an area where waste solvents were dumped into three holes. The general types of hazardous substances at JPL, now and in the past, include waste solvents such as tetrachloroethene, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, Freon, mercury, and chemical laboratory wastes.

In 1990, contractors for JPL detected significantly elevated levels of carbon tetrachloride, trichloroethene, tetrachloroethene, and other volatile organic compounds (VOCs) in ground water both under and downgradient of the site. An estimated 68,000 people obtain drinking water from municipal wells within 4 miles of the site. Four City of Pasadena wells were shut down during 1989-90 due to VOCs attributable to JPL. The city has installed a treatment system, and the wells were returned to operation in October 1990. In addition, two Lincoln Avenue Water Co. wells were shut down in 1987 due to VOCs attributable to JPL; these wells are still closed.

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**McCORMICK & BAXTER CREOSOTING CO.
Stockton, California**

McCormick & Baxter Creosoting Co. formerly operated a wood-preserving facility at 1214 West Washington Street in Stockton, San Joaquin County, California. The 29-acre site is in a light industrial area near the Port of Stockton. Old Mormon Slough, a tributary to the San Joaquin River, borders the site to the north. Except for an 8-acre portion of the site owned and leased by Southern Pacific Railroad Co. since the 1950s, McCormick & Baxter owns the entire site property.

From 1942 to 1990, McCormick & Baxter treated utility poles and railroad ties with creosote, pentachlorophenol (PCP), and arsenic compounds. Waste oils generated from the wood-treatment processes were disposed of in unlined ponds and concrete tanks on-site. Surface water runoff from the site was collected in two storm water collection ponds.

In 1983 and 1984, a consultant to McCormick & Baxter found that soils throughout the site were contaminated with arsenic, chromium, copper, PCP, and polycyclic aromatic hydrocarbons (PAHs), which are constituents of creosote. Soil contamination extends to depths of 40 feet below ground surface (bgs) in some areas. The consultant's sampling in 1984-88 indicates that the shallow aquifer beneath the site is contaminated with many of the same substances to a depth of 175 feet bgs. Beneath the site, the shallow aquifer is interconnected with the deep aquifer. The deep aquifer within 4 miles of the site provides drinking water to approximately 97,000 people.

In 1989, the California Department of Toxic Substances Control (CDTSC) detected arsenic and PCP air particulates on-site. Approximately 105,000 people live and work within 4 miles of the site.

In 1977, the California Department of Fish and Game reported a release of PCP-contaminated surface water runoff from the site that resulted in a fish kill in Mormon Slough and the Port of Stockton. The California Regional Water Quality Control Board issued a Cleanup and Abatement Order to McCormick & Baxter in January 1978. In response, McCormick & Baxter installed two storm water collection ponds and a perimeter dike around the site. People regularly fish in Old Mormon Slough and the San Joaquin River.

In October 1984, McCormick & Baxter received a permit for a concrete oily-water treatment tank and a drum storage area under Subtitle C of the Resource Conservation and Recovery Act (RCRA). With CDTSC approval, the company completed a RCRA clean closure of the permitted units in 1990. The storm water collection ponds are under Interim Status as RCRA hazardous waste management units.

The site is being proposed for the NPL because, in December 1988, the company filed for protection under Chapter 11 of the Federal bankruptcy code. Thus, the site meets a component of EPA's NPL/RCRA policy.

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UNITED STATES
ENVIRONMENTAL PROTECTION
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OERR Hazardous Site Evaluation Division Washington, DC 20460

NATIONAL PRIORITIES LIST NPL

SMELTERTOWN Salida, Colorado

The Smeltertown site covers approximately 100 acres in a rural area near Salida, Choffee County, Colorado. It consists of areas involving operations of Koppers, Inc., CoZinCo, Inc., and a smelter.

Koppers treated railroad ties on the site during 1926-46. When the surface soil became saturated with creosote dripping from the ties, a layer of sand was added and operations continued. The current owner, Butala Construction Co., scraped the soils into a pile to make room for gravel mining operations.

CoZinCo has processed zinc sulfate and smelter slag on the site since 1977. Soil on the property contains elevated levels of heavy metals, including chromium, lead, zinc, antimony, nickel, and lead, according to a 1987 EPA report. Contaminants were found in three drum storage areas, two ponds used to hold spent processing water, a pile consisting of sludge scraped from the ponds, and an area where sludge was worked into the soil.

While the smelter operated (1902-1920), molten slag was removed from the furnaces and dumped down a bluff toward the Arkansas River. Shallow soil in the smelter area is also contaminated from smelter stack emissions and spilled ore.

Ground water on the site is contaminated with heavy metals (zinc, barium, manganese, and antimony) and creosote constituents (fluorene and 2-methylnaphthalene), according to a 1988 EPA report. An estimated 3,700 people obtain drinking water from public and private wells and springs within 4 miles of the site, the nearest approximately 1,000 feet from the site.

The 1988 report also documented metals and creosote constituents in air, and metals in the Arkansas River downstream of where Kimmet Spring discharges into the river. Two recreation areas are nearby, and the river is used for fishing. An estimated 1,000 people live within 4 miles of the site.

Butala Construction Co. workers can be exposed to contaminated soil on the site. Since the site is accessible, the 200 people living within 1 mile of the site may also be exposed.

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HELENA CHEMICAL CO. (TAMPA PLANT)
Tampa, Florida

Helena Chemical Co. operates on an 8-acre site at the intersection of Orient Road and 14th Avenue in a primarily industrial area of Tampa, Hillsborough County, Florida. Helena, which is owned by Marubeni America Corp., acquired the property from Flag Sulphur, a manufacturer of sulfates. Since 1981, the company has used the site to store, repackage, and distribute liquid pesticides; small quantities of liquid pesticides are manufactured on a demand basis.

From 1967 until 1981, when manufacturing operations were shifted to another Helena facility, the Tampa plant received bulk shipments of various agricultural chemicals that were then formulated into liquid fertilizers and nutritional products. Raw materials used to formulate the pesticides included liquid zinc, liquid manganese, toluene, and xylene. Wastes generated included liquid solvent runoff containing xylene, toluene, endrin, dieldrin, chlorobenzilate, zinc, and manganese. Until 1972, liquid solvent runoff entered a small holding pond. From 1974 to 1981, Helena treated and neutralized liquid pesticide waste in a system involving three interconnected underground tanks. Since at least 1976, the facility has used a retention pond to contain storm-water runoff, and possibly to contain spillage from the liquid processing plant.

EPA investigations conducted during 1989 and 1990 detected pesticides and pesticide constituents, including 4,4'-DDD, toluene, dieldrin, manganese, and zinc, in on-site and off-site ground water and soil. An estimated 6,300 people obtain drinking water from public and private wells within 4 miles of the site, the nearest a private well 0.25 mile northwest of the site.

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STAUFFER CHEMICAL CO. (TAMPA PLANT)
Tampa, Florida

Stauffer Chemical Co. formulated pesticides adjacent to the Tampa Bypass Canal at 2009 Orient Road in Tampa, Hillsborough County, Florida, between 1951 and 1986. The site covers 40 acres in an industrial area. Currently, Imperial Chemical Industries owns the facility; in the past, it has been owned by Cheeseborough Ponds, Inc., and Unilever.

Stauffer Chemical received bulk shipments of agricultural chemicals, which it then formulated into insecticides and herbicides in the forms of dusts, grains, and liquids for packaged distribution. Between 1953 and 1973, various portions of the property were used as disposal areas, among them: 1) the "Barren Area," a large area of soil apparently contaminated through runoff from a storage/disposal area; 2) an area where 8,000 to 10,000 gallons of toxaphene, which had leaked from a tank car, were buried; and 3) an area of contaminated soil where an incinerator once operated.

EPA investigations conducted in 1987-88 documented contamination in on-site soils, sediments, ground water, and air. Contaminants included 4,4'-DDT, 4,4'-DDD, 4,4'-DDE, lindane, and alpha-BHC. The formations underlying the site are 1) the unconfined surficial aquifer consisting of interbedded sands, clays, and shells that are approximately 25 feet thick; and (2) the Upper Floridan Aquifer consisting of the Tampa Limestone, Suwanee Limestone, Ocala Group, and the Avon Park Limestone. Public and private wells within 4 miles of the site provide drinking water to an estimated 6,700 people. The nearest well is a private well 0.24 mile northwest of the site. Approximately 113,000 persons work, attend school, and/or reside within 4 miles of the facility.

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STAUFFER CHEMICAL CO. (TARPON SPRINGS PLANT) Tarpon Springs, Florida

Stauffer Chemical Co. is located in an industrialized area between Anclote Boulevard and the Anclote River in Tarpon Springs, Pinellas County, Florida, about 1.6 miles east of the Gulf of Mexico. Stauffer purchased the 160-acre facility from Victor Chemical Works in 1960. The facility's ownership has changed several times; it is currently owned by Stauffer Management Co.

From 1950 to 1981, the facility manufactured elemental phosphorus from phosphate ore. The processed ore was shipped off-site to be used primarily for production of agricultural pesticides, food-grade phosphates, and flame retardants.

During the years of operation, a number of processing wastes were disposed of on the site. A system of seven unlined lagoons, about 600 feet from the Anclote River, received discharges of waste scrubber liquid and phosphorus water, as well as overflow from a calcium silicate slag pit. At some time, two of the lagoons were dredged, and the dredged material, composed of calcium sulfate/sulfite, calcium silicate, calcium fluoride, phosphate sand, and calcined phosphate dust, was placed in two piles approximately 40 feet from the Anclote River.

Other on-site disposal activities included the dumping of furnace dust in an isolated pond and the burial of 900 drums of calcined phosphate sand consisting of 20% elemental phosphorus. Over 500,000 tons of chemical process wastes were disposed of on the site between 1950 and 1979.

The site is underlain by a surficial aquifer composed primarily of sand and the Floridan Aquifer composed of limestone. Water is reached at an average depth of 8 feet below land surface. The Floridan Aquifer is encountered at 17 to 37 feet and is approximately 100 feet thick in the area of the site.

On-site monitoring wells into both aquifers are contaminated with barium, chromium, lead, vanadium, zinc, copper, and arsenic, according to EPA tests conducted in 1988 and 1989. The 1989 tests found these metals in the on-site waste piles. An estimated 8,500 people in the Tarpon Springs area receive drinking water from 23 public wells and 3 private wells located within 4 miles of the site. Because of the depths of the aquifers, all drinking water wells within 4 miles of the site are potential targets.

EPA's 1988 and 1989 tests also detected most of the same heavy metals in the Anclote River. Surface water runoff from the facility could flow south/southwest and enter the Anclote River, which is used for fishing. From there, the Anclote River flows 1.6 miles and empties into the Gulf of Mexico. Although no surface water intakes are located along the drainage pathways of the site, numerous county parks, State parks, and beaches are present and are extensively used. In addition, several wetlands that support a number of endangered and protected species are located along the surface water pathway.

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ANDERSEN AIR FORCE BASE Yigo, Guam

Andersen Air Force Base (AAFB) is located in Yigo on the northern end of the island of Guam. The main base and annexes of AAFB occupy approximately 20,000 acres. Navy and Air Force installations occupy most of the northern half of the island. Approximately 34,000 people live within 4 miles of the site in the Cities of Dededo, Tamuning, and Yigo. The population living, working, and attending school on AAFB currently includes 3,400 military personnel, 600 civilians, and 4,000 dependents. The land occupied by AAFB provides habitat for four species designated endangered by the U.S. Fish and Wildlife Service.

AAFB has been operational since the 1940s. Its major mission is support for Strategic Air Command operations. Sources of hazardous substances at AAFB include unlined landfills, drum storage and disposal areas, chemical storage areas, fire training areas, waste storage areas, a laundry, and industrial and flight line operations. Substances known to be involved in AAFB's operations include: solvents such as trichloroethene (TCE) and paint thinners; dry cleaning fluids and laundry products; fuels such as JP-4 and gasoline; pesticides; antifreeze; aircraft cleaning compounds; and PCBs.

AAFB is located in a karst limestone terrain. Inadequately contained sources of hazardous substances are located in sinkholes that provide a direct route for contamination to reach ground water. The Northern Guam Lens, which underlies the site, has been designated a Sole Source Aquifer under the Safe Drinking Water Act. This designation is based upon two criteria: 1) the aquifer supplies drinking water to 50 percent or more of the area's population and 2) if contaminated, the aquifer would present a significant risk to public health.

Sampling by the Air Force indicates the presence of lead, chromium, TCE, toluene, and tetrachloroethene in ground water beneath the site. However, not all of these materials can be attributed to AAFB operations, and background levels have been determined for the metals, which occur naturally. An estimated 40,200 people obtain drinking water from wells within 4 miles of the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



U.S. SMELTER AND LEAD REFINERY, INC. East Chicago, Indiana

U.S. Smelter and Lead Refinery, Inc. (USS Lead) formerly operated on a 79-acre property at 5300 Kennedy Avenue in East Chicago, Lake County, Indiana. The Indiana Harbor Belt Railroad is to the north of the site, the East West Toll Road and the east branch of the Grand Calumet River to the south, Kennedy Avenue to the east, and Indiana Harbor Canal to the west. The area is primarily industrial.

From about 1906 to 1920, a copper smelter operated on the property. Starting in 1920, among other activities USS Lead operated a primary lead smelter on 25 acres of the property. In 1973, USS Lead converted to secondary smelting, recovering lead from scrap metal and old automobile batteries. Operations stopped in December 1985.

Two waste materials were generated during smelting. The blast furnace slag was piled up south of the plant building; once a year, the pile was leveled off into what was originally a nearby 21-acre wetland, according to the Army Corps of Engineers. Tests conducted in 1986 by the Indiana Department of Environmental Management (IDEM) detected elevated levels of lead in the slag.

The second waste material, lead-containing dust emitted by the blast furnace stack, was originally trapped in bag filters and stockpiled on-site for possible recycling or sale. A larger blast furnace, installed in 1973, was intended to recycle both new and stockpiled dust. Dust awaiting recycling covered a 3- to 5-acre area. Significant amounts of dust were later transferred into a building to prevent dispersion. Substantial amounts of dust remain on-site. Dust has been spread by wind throughout the building, which has become dilapidated.

In 1975, USS Lead received a permit under the National Pollutant Discharge Elimination System (NPDES) to discharge furnace cooling water and storm water run-off collected from the site to the Grand Calumet River. A second permit was issued in April 1985. Over the years, the permit levels for lead, cadmium, copper, arsenic, and zinc were frequently exceeded, according to IDEM. In the 1980s, several State and Federal enforcement actions were taken against USS Lead for permit violations. These violations, plus the dumping of slag water into the wetland, have contributed to contamination of surface water in the area. An estimated 4.1 million people obtain drinking water from intakes primarily into Lake Michigan within 15 miles downstream of where hazardous substances from the site enter surface water. Lake Michigan, the Grand Calumet River, and Indiana Harbor Canal are used for fishing. Hammond Beach Marina is 4 miles west of where the canal enters Lake Michigan. Lake Michigan, Wahala Beach, and several other major recreation areas are within 15 miles of the site.

In September 1985, the Indiana State Board of Health determined that USS Lead was in violation of State law because it was emitting lead particles into the air downwind of the site. An estimated 7,500 people work or attend school within 2 miles of the site. The Grand Calumet River Natural Area, ¼ mile southeast of the site, is habitat for two species designated as endangered by the State.

In 1980, USS Lead received Interim Status under Subtitle C of the Resource Conservation and Recovery Act (RCRA) when it filed Part A of a permit application. In April 1990, IDEM adopted a Partial Interim Agreed Order requiring USS Lead to develop a cleanup plan for the site. Sharon Steel Corp., USS Lead's parent company, agreed to loan money to USS Lead to meet the requirements. However, Sharon Steel has filed for protection under Chapter 11 of the Federal bankruptcy code.

The site is being proposed for the NPL because it satisfies a component of the NPL/RCRA policy: the owner has demonstrated an inability to finance appropriate remedial action by invoking bankruptcy laws.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5660, February 11, 1991 or subsequent FR notices.)



57TH AND NORTH BROADWAY STREETS SITE Wichita Heights, Kansas

The 57th and North Broadway Streets Site is in Wichita Heights, a residential/commercial area near Wichita, Sedgewick County, Kansas. Soil and residential and industrial wells on the approximately 180-acre area are contaminated with volatile organic compounds (VOCs) and metals. The intersection of the two streets is close to the approximate center of the major sources of contamination.

Ground water contamination at the site was first identified in 1983 when an area resident complained about bad water. In 1984, the Kansas Department of Health and Environment (KDHE) investigated the site. Follow-up investigations were conducted by KDHE (1985 and 1987) and EPA (1990). These investigations have identified the following VOCs and metals in area wells: benzene, 2,4-dimethylphenol, 1,4-dioxane, ethylbenzene, toluene, xylene, various chlorinated compounds, arsenic, barium, cadmium, chromium, and lead.

A 1989 KDHE soil-gas survey identified four sources that may be major contributors to contamination in the vicinity of 57th Street and North Broadway Street: Midland Refining Co., which operates a waste oil refining plant; Clearwater Trucking Co.; Crossroads Fina Station, abandoned in 1988 or 1989; and the former Wilko Paint Factory, which generated paint sludge and cooling water until it was abandoned in 1980 or 1981.

Other potential sources include Carlson Co., Sinclair Station, the former Tom's Tire Co., Radium Petroleum, Hills Market, an abandoned gas station, an alleged landfill, Magill Trucking Co., Cummings Diesel, and Northcutt Trailer. KDHE continues to search for other sources.

In 1990, EPA began providing bottled water to area residents and small businesses, using CERCLA emergency funds; a supply line funded by a State grant is under construction.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



AMERICAN CREOSOTE WORKS, INC. (WINNFIELD PLANT) **Winnfield, Louisiana**

The American Creosote Works, Inc., site covers 34 acres at 1006 Front Street in a primarily residential area of Winnfield, Winn Parish, Louisiana. The site began wood-treating operations in 1901 as Bodeau Lumber Co. In 1910, Bodeau Lumber sold 22 acres to Louisiana Creosoting Co., which in 1938 sold this land to American Creosote Works of Louisiana, Inc. American Creosote Works, Inc., acquired the property in 1950, along with an additional 12 acres. In 1977, American Creosote Works was bought by Dickson Lumber Co. Dickson was later declared bankrupt, and the city seized the property for taxes. Stallworth Timber purchased the property in 1980, refurbished the plant, and operated it until 1985. After State inspections revealed a number of hazardous conditions (including creosote spillage and abandoned pits and containers), the State issued a letter of warning and then a Compliance Order on January 22, 1985. Stallworth failed to comply with the order and abandoned the facility.

Various buildings and equipment remain on-site. All are deteriorating and appear unstable. Historical aerial photographs indicate that the facility used five unlined pits to receive liquid wastes. Four were located east of the process area, and one sludge pit was within the main process area. The northern portion of the plant was used for wood-treating operations and creosote storage, and the southern portion for storage of treated and untreated wood.

An EPA site inspection in March 1987 identified threats to public health and the environment due to soil and surface water contamination. Contaminants included polychlorinated dibenzodioxins, polychlorinated dibenzofurans, and various carcinogenic and mutagenic polynuclear aromatic hydrocarbons. Since the site was not fenced and local residents, including school children, crossed the site, EPA issued an administrative order to Stallworth requiring fencing and a warning sign. The fence was completed in July 1988. In March and July 1988, EPA used CERCLA emergency funds to prevent the oils and sludges that were seeping out of the storage tanks from flowing through site drainage ditches to Creosote Branch 3,000 feet downstream.

EPA tests during 1987-88 indicated soil contamination in the pit area, the on-site drainage pathway, the process area, and in residential properties bordering the site. Sediment samples taken in Creosote Branch along the north border and 3 miles downstream of the facility also contained polynuclear aromatic hydrocarbons, creosote constituents. Among on-site contaminants detected are pentachlorophenol, naphthalene, benzo(a)pyrene, lead, zinc, anthracene, acenaphthene, chrysene, fluoranthene, and fluorene. Three on-site drainage ditches receive surface water runoff from the facility. The ditches are lined with a tar-like substance, and EPA observed subterranean leaching of a creosote-like material. All three ditches empty into Creosote Branch, a fresh water wetland. Creosote Branch and Port de Luce Creek are used for recreational fishing. An estimated 5,700 persons live within 1 mile of the facility.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



BLACKBURN AND UNION PRIVILEGES Walpole, Massachusetts

Blackburn and Union Privileges (also referred to in historical documentation as the "South Street" site or "Shaffer Realty Trust" site) covers approximately 30 acres on South Street in Walpole, Norfolk County, Massachusetts. The area is primarily residential. Industrial and commercial facilities have been active on 6 of the estimated 24 lots since the 17th century, with the remainder being used as residential and non-commercial properties. Portions of the properties (principally the commercial properties) are currently owned by Shaffer Realty Nominee Trust and BIM Investment Trust.

Records identify the area occupied by these lots as "The Blackburn Privilege" and "The Union Factory Privilege" (later shortened to "Union Privilege"). These privileges were 2 of 10 original, distinct water privileges established along the Neponset River during the 17th century. The mill/factory established on the Union Factory Privilege produced snuff, iron, nails, cotton, and wool, and also functioned as a tannery. A dam on Blackburn Privilege generated power for production of machinery, cotton, yarn, batting, and lamp wicking.

During the 17th and 18th centuries, these privileges were used for a variety of industrial and commercial uses. The industrial processes used hazardous substances, including chromium, arsenic, and mercury.

In 1915, Standard Woven Fabric Co. began manufacturing asbestos brake linings on the commercial lots. The process started with the crushing of the raw asbestos. A pile of asbestos waste materials remains on the site. In 1920, the company changed its name to Multibestos. Operations ceased in 1937, when the properties were sold to Kendall Co.

Kendall operations involved the washing, scouring, and bleaching of cotton, followed by fabric production involving carding, washing, rinsing, drying, and winding. Waste water from the cotton operations was brought within sewer permit requirements for pH, then discharged to two lagoons, where the cotton fibers settled out before the water was discharged to the sanitary sewer. Use of Lagoon No. 1 stopped in 1982. Lagoon No. 2 continued to receive non-contact cooling water until approximately 1985.

On December 15, 1988, under CERCLA Section 106(a), EPA issued an order requiring Shaffer Realty Nominee Trust and BIM Investment Trust to conduct a removal action at the site. During the response to the order, the companies' contractor detected elevated concentrations of asbestos, lead, arsenic, nickel, and other inorganic elements, as well as volatile and non-volatile organic compounds, in on-site soils, sediments, and ground water. Municipal wells drawing on the School Meadow Brook/Mine Brook aquifer within 4 miles of the site provide drinking water to 19,500 residents of the Town of Walpole. The nearest well is 0.7 mile from the site.

The site is within the boundaries of the Neponset River drainage basin. The river borders the commercial properties on the lots' southern sides.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



BIG RIVER MINE TAILINGS/ST. JOE MINERALS CORP. Desloge, Missouri

The Big River Mine Tailings/St. Joe Minerals Corp. site in Desloge, St. Francois County, Missouri, was used for disposal of lead mine tailings during 1929-58. The site is in a former mining region about 70 miles south of St. Louis often referred to as the "Old Lead Belt." The region (approximately 110 square miles) contains numerous tailings ponds and piles.

St. Joe Minerals Corp. operated the site, disposing lead-, cadmium-, and zinc-rich mine tailings over approximately 600 acres in a rural area bordered on three sides by Big River. In 1972, the company donated 502 acres of the land to St. Francois County, which then leased the land to St. Francois County Environmental Corp. (SFCEC). Since 1973, SFCEC has operated a sanitary landfill on approximately 60 acres of the southern section of the tailings pile.

EPA learned of the site in 1977, when an estimated 50,000 cubic yards of tailing slumped into the Big River during a heavy rain. After the collapse, the Missouri Department of Conservation detected elevated lead levels in bottom-feeding fish and advised local residents not to eat the fish. In 1981, St. Joe Minerals attempted to stabilize the tailings. In 1982, an extensive investigation conducted by the Columbia National Fisheries Research Laboratory detected elevated lead concentrations (5 to 26 micrograms per liter) in the surface water. Elevated lead levels were reported in the bottom-feeding biota. Big River is used for recreational fishing, water-contact recreation, and watering of commercial livestock.

In January 1988, during a site reconnaissance, EPA noted a strong wind that was creating a suspended particulate plume. EPA sampled the tailings pile in January 1988 and July 1990, detecting elevated concentrations of lead, cadmium, and zinc. High-volume air sampling conducted during the 1990 site investigation indicated that wind erosion and airborne dust created a potential hazard for on-site workers, residents, and children at a day care center. Approximately 23,000 people live within 4 miles of the site. People on the site are also exposed to contaminated soil.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



GENERAL ELECTRIC CO./SHEPHERD FARM East Flat Rock, North Carolina

The General Electric Co./Shepherd Farm site is in East Flat Rock, Henderson County, North Carolina. Since 1955, General Electric's Lighting System Division has manufactured various types of luminaire systems on a 50-acre property bounded by Tabor Road, Spartanburg Highway (U.S. 176), and Bat Fork Creek. On the GE property are a manufacturing plant, a warehouse, plots used for landspreading of wastes, two unlined waste treatment ponds, a sludge impoundment, landfills, and a recreation center.

From 1957 to 1970, wastes from the General Electric (GE) facility were also disposed of approximately 2,500 feet to the southwest in an old dry pond or ravine known as Shepherd Farm. Wastes were brought to this 3-acre area and deposited, burned, then bulldozed. A trailer park is now located on a portion of the old dump site. Samples collected in May 1990 by EPA indicate primarily the same waste types and contaminants are present on Shepherd Farm and the GE property. GE wastes were also deposited on the Seldon Clark property located across Tabor Road from GE. GE wastes may also have been deposited in other nearby areas.

Studies conducted by EPA, the State, and GE between 1976 and 1989 revealed that several inorganic compounds and volatile organic compounds (VOCs) had contaminated ground water and surface water sediments on and off both the GE property and the farm. A drainline that carried wastewater from the manufacturing plant to the treatment ponds had apparently ruptured. VOCs also contaminated 19 nearby private wells. Municipal water lines have been extended to these homes. The wastewater treatment ponds and sludge impoundment on-site were found to be contaminated with PCBs and heavy metals.

Among the compounds identified in on-site and off-site wells are tetrachloroethene, trichloroethene, 1,2-dichloroethene, 1,2-dichloroethane, cobalt, chromium, copper, lead, nickel, zinc, and manganese. An estimated 4,400 people formerly obtained drinking water from private wells within 4 miles of the site, the nearest 0.04 mile from the site.

Soils in the trailer park contain PCBs, according to a 1991 EPA report.

The GE plant received Interim Status under Subtitle C of the Resource Conservation and Recovery Act (RCRA) in 1980 when the company filed Part A of a permit application. In 1984, GE converted to a hazardous waste generator. The site is being proposed for the NPL because as a converter it satisfies a component of EPA's NPL/RCRA policy.

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NORTHWEST PIPE & CASING CO. Clackamas, Oregon

The Northwest Pipe & Casing Co. site covers 53 acres in northwest Oregon in Clackamas, Clackamas County. The site is located in an industrial park and is bordered on the west by railroad tracks, on the north by a large grassy field, on the east by another industrial park, and on the south by the Camp Withycombe Oregon National Guard facility.

From 1956 to 1985, operations included coating pipes, which involved sandblasting the pipes with steel shot, spraying the pipes with primer, and coating the pipes. Coatings used in the operation included coal tar, coal tar epoxy, cement mortar, and asphalt. Wastes from these operations were apparently spilled, burned, or buried on-site. A large waste pile of unknown origin is in the northwestern part of the site.

EPA's limited sampling at the site, conducted in July 1988, indicated widespread contamination of surficial soil. Polycyclic aromatic hydrocarbons (PAHs), which are common constituents of coal tar, PCBs, and some volatile organic compounds (VOCs) were the primary contaminants detected. A more extensive investigation conducted by EPA between December 1989 and February 1990 detected elevated levels of VOCs, PAHs, and PCBs in on-site soil, sediment, surface water, and ground water. Among specific compounds detected are trichloroethene, vinyl chloride, phenanthrene, naphthalene, and anthracene. Contaminants were also detected in off-site ground water and sediment. A comprehensive geophysical survey identified six areas where buried wastes may be contributing to the contamination.

Approximately 6,100 people obtain drinking water from private and municipal wells within 4 miles of the site; the nearest well is 0.75 mile from the site. Surface water drainage from the site eventually flows into the Willamette River, which contains wetlands and endangered species and is used for fishing.

Under an order issued by the Oregon Department of Environmental Quality, the current site owner has fenced the site; however, it is subject to vandalism and trespassing, thus exposing nearby residents to contaminated soil. Approximately 5,200 people live within 1 mile of the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



AUSTIN AVENUE RADIATION SITE Delaware County, Pennsylvania

The Austin Avenue Radiation Site consists of 29 radioactively contaminated properties located in four boroughs and one township in Delaware County, Pennsylvania. The properties are: In Lansdowne Borough: the warehouse on South Union Avenue; 131, 133, and 136 Austin Avenue; 216 and 218 Wayne Avenue; 6, 10, and 16 Plumstead Avenue; 237 North Lansdowne Avenue; 11 Greenwood Avenue; and 126 Owen Avenue. In East Lansdowne Borough: 34 Lewis Avenue; 211 Penn Boulevard; 246 Melrose Avenue; 25, 137, and 151 Lexington Avenue; and 25 Beverly Avenue. In Upper Darby Township: 500 and 504 Harper Avenue; 346 Owen Avenue; 310 Shadeland Avenue; and 3723 Huey Avenue. In Aldan Borough: 64 South Clifton Avenue. In Darby Borough: 617, 619, 621, and 623 Pine Street.

The suspected source of the radioactive contamination is materials generated at the warehouse on South Union Avenue, where the defunct W.L. Cummings Radium Processing Co. operated a radium-refining process from 1915 to 1925. The properties are believed to have become contaminated when discarded radium tailings from the warehouse operations were used as construction materials at these locations.

Using CERCLA emergency funds, EPA temporarily relocated the residents from seven of the properties, conducted an initial assessment of over 100,000 properties using a radiation detection vehicle, visited 50 properties to conduct further monitoring, removed debris from the warehouse, and painted the warehouse interior to prevent potential transport of radioactive dust while the building is dismantled.

On September 6, 1991, the Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service issued an advisory warning that the gamma radiation levels in the duplex at 133 Austin Avenue represent a significant health threat and furthermore that this property and the abandoned warehouse pose a threat to the environment based on the radium, radon, and asbestos in the structures.

On January 10, 1992, ATSDR issued a follow-up health consultation memorandum which expanded the public health advisory to include seven newly discovered sites plus any future sites which EPA and ATSDR determine may present a significant threat to human health.

Under Section 300.425(c)(3) of the National Contingency Plan, the Federal regulation by which CERCLA is implemented, a site can be placed on the NPL if 1) ATSDR has issued a public health advisory recommending that people be removed from the site, 2) EPA determines that the site poses a significant threat to public health, and 3) EPA anticipates that it will be more cost-effective to use its remedial authority (available only at NPL sites) than its emergency removal authority to respond to the site.

Under Section 300.425(c)(3) of the National Contingency Plan, the Federal regulation by which CERCLA is implemented, a site can be placed on the NPL if 1) ATSDR has issued a public health advisory recommending that people be removed from the site, 2) EPA determines that the site poses a significant threat to public health, and 3) EPA anticipates that it will be more cost-effective to use its remedial authority (available only at NPL sites) than its emergency removal authority to respond to the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



CRATER RESOURCES, INC./KEYSTONE COKE CO./ALAN WOOD STEEL CO. Upper Merion Township, Pennsylvania

The Crater Resources, Inc./Keystone Coke Co./Alan Wood Steel Co. site is located at 2200 Renaissance Boulevard, Upper Merion Township, Montgomery County, Pennsylvania. The site consists of three inactive quarries on an undeveloped parcel of land in a mixed industrial/residential/commercial/agricultural area. From 1918 to 1977, Alan Wood Steel Co. disposed of waste generated in its coking facility located in Swedeland, Pennsylvania, into the three quarries. After the company declared bankruptcy, the ownership of the coking facility and property was transferred over a 3-year period to Alabama By-Products Corp. Keystone Coke Co., a wholly-owned subsidiary of Alabama By-Products, continued to dispose of waste generated in the coking facility into one of the quarries until 1980. Since 1979, Crater Resources, Inc., has owned the property.

Quarry No. 1 covers 2.23 acres and is 10 to 20 feet deep. It was used for disposal of phenolic and tar wastes from approximately 1918 to 1965 via a pipeline from the Alan Wood Steel coking facility. The quarry has been filled in with demolition wastes. *Quarry No. 2* covers 0.69 acre and is 15 feet deep. Wastes similar to those deposited in Quarry No. 1, as well as solid wastes, including cinders, bricks, and paint cans, were trucked in for an unknown period. This quarry has also been filled in. *Quarry No. 3* covers 3.25 acres, ranging in depth from 60 feet at the western end to 10 feet at the eastern end. This quarry is also known as the waste ammonia liquor (WAL) quarry or lagoon. Phenolic and tar wastes were deposited in this quarry from approximately 1918 to 1980.

During 1977-79, the Pennsylvania Department of Environmental Resources (PA DER) sampled WAL discharges to Quarry No. 3, ground water discharges to neighboring quarries, and area wells. PA DER sampling documented elevated levels of cyanide, ammonia, and phenol in the WAL discharge and in ground water in the area.

In May 1979, EPA investigated possible sources of contamination threatening Upper Merion Reservoir, a public drinking water source. EPA found phenolic compounds, benzene, naphthalene, and other organic contaminants in the WAL quarry. In May 1983, EPA found benzene, toluene, phenolic compounds, polycyclic aromatic hydrocarbons, cyanide, zinc, lead, and arsenic in liquids and sediments in the bottom of the WAL quarry. In June 1990, EPA resampled the site, collecting samples from waste and soil in the WAL quarry, an area of ponded water near the quarry, a borehole drilled into the fill material in Quarry No. 1, off-site monitoring and private wells, and the Upper Merion Reservoir 1 mile to the northwest. Waste in the WAL quarry contained elevated levels of cyanide, arsenic, benzene, lead, zinc, polycyclic aromatic hydrocarbons, and other contaminants.

An estimated 77,000 people obtain drinking water from public and private wells within 4 miles of the site, the closest a private well 0.19 mile from the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



**FOOTE MINERAL CO.
East Whiteland Township, Pennsylvania**

The Foote Mineral Co. site covers 79 acres on Bacton Hill Road in East Whiteland Township, Chester County, Pennsylvania. The site is bordered on the northwest by Conrail tracks and on the west by Church Farm School property. Since 1988, the company has been a part of Cyprus Specialty Metals Co. Foote has manufactured lithium halides and lithium metal products in both liquid and solid form since 1942. In addition, Foote custom-grinds a variety of minerals and alloys. In the past, the company produced inorganic fluxes for the steel industry and other metal products.

Various disposal practices have been used over the years. Large amounts of lithium waste waters were disposed of into a former limestone quarry known as the "wet quarry" until 1975, when Foote stopped the disposal under orders from the Pennsylvania Department of Environmental Resources. Until 1966, municipal wastes, demolition debris, and waste water from cleaning drums contaminated with lithium were disposed of in a nearby "dry quarry." The wet quarry contains approximately 50 feet of waste material; the dry quarry, 15 feet.

Until 1975, three unlined settling ponds were used to collect impurities associated with crushing and grinding of lepidolite ore. In addition, waste organic solvents and soluble lithium wastes were burned in a pit intermittently during 1960-79. Also, drums containing waste lithium arsenite were buried on-site.

Lithium, chromium, arsenic, antimony, tetrachloroethene, trichloroethene, 1,2-dichloroethane, and benzene are present in on-site monitoring wells. Lithium, chromium, and boron are present in off-site private wells, according to tests conducted since 1988 by EPA. Lithium is also present in an off-site public well. An estimated 42,300 people obtain drinking water from public and private wells within 4 miles of the site, the nearest a private contaminated well 800 feet downgradient of the site. Four public water systems are involved: Philadelphia Suburban Water Co., Uwchlan Township Municipal Authority, and two small systems.

On June 29, 1990, Cyprus Foote Mineral Co. and EPA signed an Administrative Consent Order under Section 1431(a) of the Safe Drinking Water Act. Under the order, Cyprus Foote was to 1) conduct a survey of all drinking water wells in the area potentially impacted by lithium, boron, and chromium contamination, 2) provide alternative water supplies to any home with unacceptable levels of contamination from those three elements, and 3) establish a long-term monitoring program to ensure a level of future protection. Cyprus Foote has fully complied with the requirements of the order.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



METROPOLITAN MIRROR AND GLASS CO., INC. Frackville, Pennsylvania

Metropolitan Mirror and Glass Co., Inc., manufactured mirrors in Frackville, Schuylkill County, Pennsylvania, from 1959 to 1982, when it went bankrupt. The 8-acre site is an industrial area at the intersection of Industrial Road and Altamont Boulevard.

In 1982, after the bankruptcy, National Patent Development Corp. acquired the site, then sold it in May 1987 to St. Jude Polymer Co. Since then, St. Jude has recycled plastic bottles on the site; currently, no wastes are disposed of on-site. In 1986, Keystone Water Co. found tetrachloroethene in its wells, which supplied drinking water to Frackville. A Pennsylvania Department of Environmental Resources (PA DER) investigation identified Metropolitan Mirror as a possible source of the contamination. In response to PA DER's investigation, EPA conducted a series of investigations that were unable to confirm that Metropolitan Mirror is a source of tetrachloroethene in the public wells.

Metropolitan Mirror used silver solutions, paint strippers, paint thinner, and other solvents in its manufacturing operations and stored them on-site. At any one time, two waste water settling lagoons were in use; sludge dredged from the lagoons is believed to have been deposited nearby. One pair of lagoons was used before 1967, a second pair during 1967-82. EPA tests conducted in 1988 and 1989 found aluminum, heavy metals (including mercury and lead), ethylbenzene, and xylenes in sludge in the two lagoon areas and in soils in the drum storage area. Because all three areas are unlined, ground water is shallow (less than 10 feet in some places), and soils are permeable, contaminants could migrate into ground water. An estimated 1,000 people obtain drinking water from public and private wells within 4 miles of the site, the nearest a private well within 0.2 mile of the site.

The drum storage area is adjacent to the St. Jude Polymer manufacturing building, thus exposing the company's 25 workers to contaminated soil. An estimated 3,800 people live within 1 mile of the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



KOPPERS CO., INC. (CHARLESTON PLANT)
Charleston, South Carolina

Koppers Co., Inc., operated a milling, wood-preserving, and pole storage facility in the Charleston Heights District of Charleston, Charleston County, South Carolina, during 1925-78. The 127-acre site is in a mixed industrial/residential area. It is bordered on the west by Ashley River, and on the north and south by industrial facilities. Approximately 94,000 people live within 4 miles of the site.

Sources of hazardous substances on the site include a pit where timbers were soaked in creosote wood preservative, the "drip pad area" where the timbers were stored, and a bermed area that received contaminated sediment from canal dredging on the site. Southern Dredging Co. leased part of the site in 1978 after wood-preserving operations had stopped. In 1984, the company dredged a canal from the Ashley River, intersecting a waste disposal area. Dredged materials were placed in the bermed area.

EPA tests conducted in 1988 detected numerous polynuclear aromatic hydrocarbons (PAHs), which are constituents of creosote, in soil in all three sources. Runoff from all three sources enters the Ashley River. The 1988 tests found PAHs, chromium, copper, and zinc (metals typically used in wood preservatives) in sediment samples from the canal and the Ashley River.

Wetlands are adjacent to the site, and wetlands to the west and southwest are a State wildlife sanctuary. The Ashley River and Charleston Harbor support recreational and commercial fishing, and serve as important breeding and nursery habitats for a variety of marine finfish and shellfish.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



MEMPHIS DEFENSE DEPOT Memphis, Tennessee

The Memphis Defense Depot is comprised of 642 acres in south central Memphis, Shelby County, Tennessee. It is located in a mixed residential/commercial/industrial area. The site consists of two contiguous sections: Dunn Field, an open storage and burial area of about 60 acres; and the main installation.

In operation since 1942, the depot is a major field installation of the Defense Logistics Agency. Its primary function is to provide material support (including clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals) to all U.S. military services and some civilian agencies. The depot has conducted numerous operations dealing with hazardous substances.

A total of 75 waste disposal areas and other areas of concern have been identified at the facility, most of them in Dunn Field. Among the wastes disposed of, according to the Department of Defense (DOD), are oil, grease, paints, paint thinners, methyl bromide, and pesticides. In addition, stored materials have reportedly spilled and leaked at the main installation, as well as at Dunn Field, contaminating soil with volatile organic compounds, metals, PCBs, polynuclear aromatic hydrocarbons, and pesticides.

Shallow ground water is contaminated with arsenic, lead, chromium, nickel, tetrachloroethene, and trichloroethene, according to tests conducted in 1989 by DOD. An estimated 154,300 people obtain drinking water from public and private wells within 4 miles of the site. The nearest well, within 0.5 mile of hazardous substances at the depot, also provides water for commercial food production. These wells draw from deeper ground water, which is not now contaminated.

There was recreational fishing on Lake Danielson, a 4-acre man-made lake on the facility, until 1986, when DOD tests found pesticides (DDD, DDE, dieldrin, and chlordane) and PCBs in lake sediment and fish tissue. The tests also found cadmium, chromium, lead, and zinc in lake sediments.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



RICHARDSON FLAT TAILINGS Summit County, Utah

The Richardson Flat Tailings site covers approximately 160 acres in a valley 1.5 miles northeast of Park City, Summit County, Utah. One source of hazardous substances on the site is a tailings dam and associated tailings materials that came from the Keetley Ontario Mine and other metal mining operations currently owned by United Park City Mines (UPCM). The most recent use of the area for tailings disposal was during 1975-81, when UPCM leased its mining properties to either Park City Ventures or Noranda Mining, Inc. The two companies constructed and operated milling facilities on UPCM properties.

A second source is a 6-acre "flood plains tailing pile" immediately west of the tailings pond on the banks of Silver Creek. Historical aerial photos show that the pile was in existence as early as 1953. During 1989-90, EPA and the State observed tailings slumping into an on-site diversion ditch and Silver Creek. The tailings contain arsenic, cadmium, copper, lead, mercury, silver, and zinc, according to EPA tests conducted in 1985 and 1989. The State classifies Silver Creek as a cold water fishery. Wetlands border the creek and diversion ditch. Water from the creek is diverted to irrigate approximately 300 acres of pastureland.

High-volume air sampling at the site in 1986 documented that arsenic, cadmium, lead, and zinc were released to the air. An estimated 4,500 people live within 4 miles of the site.

This site was proposed to the NPL on June 24, 1988 (55 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comment, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on February 11, 1991 (56 FR 5598). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water migration pathway, which is scored differently under the two systems.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



NAVAL SURFACE WARFARE CENTER-DAHLGREN Dahlgren, Virginia

The Naval Surface Warfare Center-Dahlgren (NSWC) covers 4,000 acres in Dahlgren in King George County, Virginia, 40 miles south of Washington, DC on the west bank of the Potomac River. The area is primarily residential and agricultural. Established in 1918, NSWC serves as the principal Navy research, development, testing, and evaluation facility for surface ship weaponry, naval mines, strategic systems, and warfare analysis. NSWC encompasses two areas: the Main Site, which occupies 2,678 acres, and the Explosive Experimental Area (EEA), an isolated testing range on a 1,614-acre island. EEA is separated from the Main Site by Upper Machodoc Creek. Located on the Main Site are areas used for air operations, a security area where a variety of ordnance are tested, laboratories, computer facilities, administrative offices, and residential areas. The on-base population includes 3,200 civilian and 100 military personnel and 154 housing units.

A 1983 Navy study identified several sources of hazardous materials, including three on the Main Site.

The *1400 Area Landfill (Site 17)* covers 5-10 acres. For three years in the 1970s, municipal wastes were deposited at the landfill. Canisters of mercury apparently also have been buried. Low levels of mercury were found in shallow ground water and stream sediments in the vicinity of the landfill. Downstream in Hideaway Pond, stream sediments and fish contain mercury above the Food and Drug Administration Action Levels. Also downstream of the 1400 Area Landfill are wetlands along Gambo Creek and the Potomac River.

The *Pesticide Rinse Area (Site 25)* was formerly used for draining and rinsing of pesticide containers. Sampling results indicate area soils and shallow ground water are contaminated with pesticides, including DDD, DDE, and DDT. Surface water runoff from the rinse area drains into the Potomac River.

The *Transformer Draining Area (Site 19)* was used in the 1950s for the draining of electrical transformer oil containing PCBs. The 1983 study indicates soils are contaminated with PCBs to a depth of 4 feet.

Two aquifers underlie NSWC: the shallow Nanjemoy aquifer, which supplies drinking water to a small number of private homes; and the deeper Potomac Group aquifer, which provides municipal water supplies and drinking water for NSWC. An estimated 6,900 people obtain drinking water from municipal and private wells within 4 miles of NSWC.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)



NAVAL WEAPONS STATION-YORKTOWN Yorktown, Virginia

The Naval Weapons Station-Yorktown covers 10,500 acres primarily in central York County on the York River in Yorktown, Virginia. Since the facility was established in 1918, its primary mission has been to maintain, produce, and store ordnance. The station also contains facilities for administration, personnel housing, and operational support. The on-base population includes 3,200 military and civilian personnel and 47 housing units. Surrounding the facility is the York River, the Colonial National Historical Park, the Whiteman Swamp, and the Naval Supply Center-Cheatham Annex. The facility has used trinitrotoluene (TNT), cyclotrimethylene trinitramine (RDX), cyclotetramethylene trinitramine (HMX), and various metals and organics in its past and current operations.

Navy studies conducted during 1983-89 have identified 21 sources of hazardous materials, including the six described below.

Turkey Road Landfill (Site 2) covers 5 acres in wetlands of Felgates Creek. Mercury batteries, missile hardware, inert mines and bombs, construction rubble, and electrical shop hardware were reportedly disposed in the landfill. Ground water, surface water and sediments contain phenols and/or arsenic.

Burning Pad Residue Landfill (Site 4) covers a few acres and was used for disposal of batteries from weapons, burning pad residues (possibly containing aluminum, RDX, TNT and 2,4-dinitrotoluene), fly ash from coal-fired boilers, mine casings, electrical equipment, and transformers. Ground water, surface water, and sediments contain several volatile organic compounds, explosive contaminants, and metals.

Explosive Contaminated Wastewater Impoundment (Site 6) covers 3 acres and includes a drainage way. The wastewater discharged to the unlined impoundment included solvents (trichloroethene, trichloroethane, other chlorinated hydrocarbons and possibly cyclohexanone) and residues of TNT and RDX. Surface water and sediment downstream contain several solvents and explosive contaminants.

Plant 3 - Explosive Contaminated Wastewater Discharge Area (Site 7) covers 5 acres and was a discharge point for wastewater containing TNT, RDX, HMX, trichloroethene, and cyclohexanone. Explosive contaminants were detected in surface water and sediment samples downstream.

Plant 1 - Explosive Contaminated Wastewater Discharge Area (Site 9) is an unlined drainage way (500 to 600 feet) used in the past for explosive-contaminated wastewaters. Explosive contaminants were detected in surface soil samples obtained from the discharge area and in surface water and sediment samples obtained downstream. Explosives have been found in Lee Pond, a fishery, downstream of the site.

Conveyor Belt Soils Area at Building 10 (Site 19) consists of soils directly below and adjacent to a conveyor belt used for transporting explosives. Surface soils under the conveyor belt are contaminated with TNT.

Surface water runoff from the six sources flows to the York River. The York River drainage basin in the area of the site includes wetlands, endangered species, and fisheries. The York River converges with the Chesapeake Bay approximately 12 miles downstream.

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TUTU WELLFIELD Tutu, Virgin Islands

The Tutu Wellfield site involves a plume of contaminated ground water covering approximately 108 acres in Tutu in a mountainous semi-rural area of eastern central St. Thomas, U.S. Virgin Islands.

In July 1987, a strong petroleum odor was detected in the Tillet Well, a public supply well in the area. At the request of the Virgin Islands Department of Planning and Natural Resources (VIDPNR), EPA sampled over 100 wells in the area. Volatile organic compounds such as benzene, toluene, trans-1,2-dichloroethene, trichloroethene (TCE), and tetrachloroethene (PCE) were detected in several public supply, institutional, commercial, and private wells. Water from several commercial wells in this area was hauled to other parts of the island. The Tillet Well, three private wells, and 13 commercial wells subsequently closed down, and alternative sources of water, including trucking water to the area, were made available.

In July and September 1987, VIDPNR issued Administrative Orders on Consent to Tutu Texaco Service Station and Tutu Esso Car Care Center to investigate the release of petroleum from their underground storage tanks (USTs). In August 1987, EPA identified seven more potentially responsible parties (PRPs): one other gasoline service station (Rodriguez Auto Parts), two vehicle maintenance repair stations (Ramsay Motor Co. and Consolidated Auto Parts/Gasset Motors), two Territorial government agencies (Virgin Islands Housing Authority and Department of Education, formerly the Laga Building), a dry cleaner (O'Henry Cleaners), and a silk screening operation (Jim Tillet, Inc./Tillet Gardens). Potential sources of hazardous substances at these locations include petroleum and waste oil USTs, drum storage areas, contaminated catch basins, oil separators, floor drains, a sump holding tank, a leaching pit, above-ground tanks, and an evaporation pit. Wastes that may have been disposed of include solvent-based auto flushes, treatments, degreasers, cleaners, and lubricants; antifreeze; kerosene; hydraulic fluid; waste oils; spent PCE waste and filters; dry cleaning fluids such as 2-butoxyethanol, hexylene glycol, and dye stripper; ammonium hydroxide; and mineral spirits. In September 1987, EPA used CERCLA emergency removal funds to decontaminate five residential cisterns, provide alternative water supplies, and monitor local wells.

Since August 1987, EPA has detected many of the same chemicals found in drinking water wells in the soils on the properties of several of the PRPs. Semivolatiles such as phenols and polyaromatic hydrocarbons were also detected at a few of these properties, as was cadmium. An estimated 1,600 people formerly obtained drinking water from public and private wells within 4 miles of the site.

In March 1990, EPA issued a unilateral Administrative Order to O'Henry Cleaners, Esso Standard Oil Co., and Texaco Caribbean, Inc., to take over EPA's removal action. In September 1990, the three companies began the monitoring program and arranged with the Virgin Islands Housing Authority to extend water lines to owners of the four contaminated private wells.

Tutu is located in the Upper Turpentine Run Basin. An intermittent stream leading to Turpentine Run is within a few hundred feet to the southwest. Turpentine Run flows southward approximately 2.8 miles to Mangrove Lagoon, which is hydraulically connected to the Caribbean Sea. The Atlantic Ocean lies approximately 1 mile to the north.

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REFUSE HIDEAWAY LANDFILL Middleton, Wisconsin

The Refuse Hideaway Landfill encompasses 23 acres of a 40-acre parcel of land in a rural area in Dane County, Wisconsin. It is off U.S. Highway 14, 2 miles west of Middleton and 4 miles east of Cross Plains.

Municipal, commercial, and industrial wastes were disposed of at the privately owned unlined site between 1974 and 1988. The landfill owner reports receiving full barrels of glue and paint, spray paint booth by-products and paint stripper sludge, and spill residues containing methylene chloride, acetone, and other solvents. Based on volume calculations, the landfill could hold up to 1.2 million cubic yards of waste.

The Wisconsin Department of Natural Resources (WDNR) closed the site under court order in 1988 when volatile organic compounds (VOCs) were discovered in private wells southwest of the site. The owner closed the landfill according to the Wisconsin Administrative Code in late 1988, covering it with 2 feet of clay, 18 inches of general soil, and 6 inches of top soil, and seeding the cover. In January 1989, the owner declared bankruptcy.

A WDNR inspection conducted in 1990 revealed that the cap is eroding. Tests conducted in 1991 by a WDNR consultant detected vinyl chloride, tetrachloroethene, methylene chloride, 1,1-dichloroethane, 1,2-dichloroethane, and trichloroethene in ground water downgradient of the site, including two private wells. Several of these compounds were disposed of at the site, according to the owner's records. An estimated 14,600 people obtain drinking water from public and private wells within 4 miles of the site. The nearest well, within 0.5 mile of the site, is a private well and is contaminated. Wells are also used to water cattle. Some contaminated wells have been outfitted with treatment systems and others are being taken out of service. WDNR's 1991 study indicates that the plume of contaminated ground water extends as far as 3,800 feet southwest of the site.

In 1991, WDNR started to operate a system to collect methane gas and leachate.

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